



# Pollution Prevention Case Study

LORD CORPORATION

Mechanical Products Division

Cambridge Springs Facility

# Pollution Prevention Case Study

- Location: CS, PA on banks of French Creek
- Employment: 190
- Products: Rubber-to-metal Vibration Isolators
  - ◆ for example – Motor Mounts
- Markets:
  - ◆ On & Off highway vehicles
    - ☞ HD/GM/JD/Cat/Case
  - ◆ Subway track pads
    - ☞ Philadelphia/Pittsburgh/Detroit/Chicago/Buffalo/NYC
  - ◆ Water Craft
    - ☞ Mercury Marine

# Pollution Prevention Case Study (metal preparation)

- Steel Grit Blasting
- Aluminum Oxide Grit Blasting
- Alkaline Cleaning/Degreasing
- Zinc Phosphatizing Of Steel
- Alodizing Of Aluminum

# Pollution Prevention Case Study (metal preparation)

- Recovery systems on grit blasters
- Switched to alkaline cleaning
- Ultrafiltration of alkaline cleaners
- Micro-Addition of chemicals
- Flow restrictors on rinse tanks
- Scrubber water to rinse tanks
- Recycle rinse water

# Pollution Prevention Case Study (adhesive application)

- Spray Transfer (Manual & Auto)
- Dip Tanks (Conveyorized)
- Fixture Cleaning

# Pollution Prevention Case Study (adhesive application)

- HVLP spray guns
- Intermittent conveyor & spray
- Monitor coating thickness
- Inventory control
- Burn-off oven
- Soy based fixture cleaner
- Dry booths

# Pollution Prevention Case Study (rubber bonding)

- Transfer Presses
- Injection Presses

# Pollution Prevention Case Study (rubber bonding)

- Redesign molds
- Recycle rubber waste
- Ultrafiltration of hydraulic fluid
- Biological treatment of water/hyd. fluid
- Cryogenic salvage



# Pollution Prevention Case Study (general plant activities)

- Administrative
- Shipping / Receiving
- Chilled Process Water

# Pollution Prevention Case Study (general plant activities)

- Recycle office paper
- Recycle cardboard
- Recycle pallets
- TDS controllers on chilled water system

# Pollution Prevention Case Study

## Replacements

- PCE Degreasing
- MC Fixture Cleaning
- Mineral Spirits Parts Washer
- Wet Spray Booths
- PCE Salvage
- Alkaline Degreasing
- Soy/Oven Fix. Clean.
- Biological or Citric Parts Washer
- Dry Spray Booths
- Cryogenic Salvage

# Pollution Prevention Case Study

## Obstacles & Benefits

- Company Culture
- Customers
  - ◆ Fixed Part Approvals
  - ◆ Break – Boeing approved alkaline degreasing
- Cost
  - ◆ Non-HAP solvents
- Savings: >\$100,000/yr.

# Pollution Prevention Case Study

## Legacy of PCE Degreasing

- Cambridge Springs
  - ◆ Phytoremediation under Act 2
- Other Lord facilities
  - ◆ Pump & Treat
  - ◆ Air Sparging
  - ◆ ERD (Molasses)